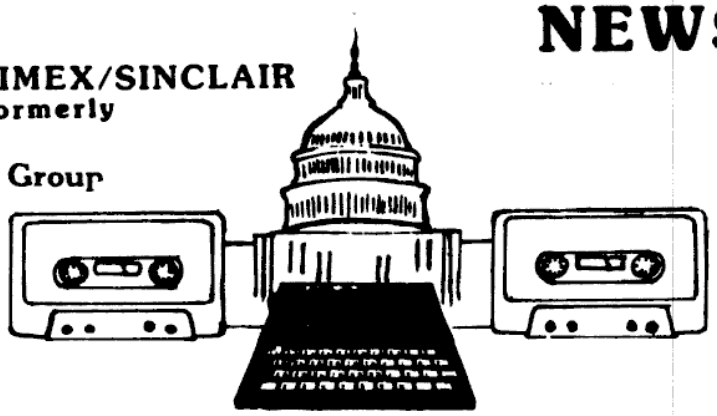
CATS NEWSLETTER

CAPITOL AREA TIMEX/SINCLAIR USERS GROUP :Formerly
Prince George's Timex/Sinclair User's Group



Vol 1, No. 9
December, 1983

CONTENTS

*** A COMPUTING PHILIPPIC ***

WELCOME to our final issue of the year. 1983 has turned out to be a great year not only for the Computer Industry, Timex and of course Capital Area Timex/Sinclair Users' Group. We have gone from nothing in January to over 120 paid members in November. We hope to close the year with at least 125.

Timex promised us many things in 1983. They came out finally with the TS2068 in October. They also started delivering the TS2020 Tape Recorder. They have promised the Modem for sometime in December. And before I forget, the TS1500. Many people don't know yet where the 1500 fits in the scheme of things. But if you were unhappy with the 1000, the 1500 should answer your questions about a replacement for the 1000 keyboard. The coming of the 80 column full size printer early in 1984 should really have the Timex machines take off. The microdrives will really lick the storage capacity of the machines. And of course if the local network is handled correctly we should all be able to communicate using our machines over the telephone.

There were some very unhappy Computerists during 1983. They were very disappointed in the way TIMEX has handled the relationships with the peripheral manufacturers that support the Timex machines. They also were very impatient with Timex in late delivery of promised production. I don't feel that Timex has given its just due when it comes to recognizing those that support it's products. The people that really count are the members of the TIMEX/SINCLAIR Users' Groups throughout the U.S. and Canada. These members are the CONSUMERS that TIMEX better cater to or else lose the entire market to machines that may not meet all the standards of the Timex but at least recognize that there are people out there in the marketplace that can make or break the Timex. Another very important person is the Vendor or dealer who sells the Timex on the retail level. He doesn't seem to get much support at all. The leaders of the User Groups give more support to Retailers that Timex

Continued on p.4

FROM THE EDITOR

HERE'S our bonus sized, holiday issue. That "our" in the last line is signifigant. There has been a wonderful response to my requests for help on the newsletter. It's reflected in the list of people involved with this issue. There aren't that many more names present, but 75% of those listed helped with the nuts & bolts of production, as well as with the writing! You, the reader can help also; if there are any problems with the composition of the newsletter - crooked copy, confusing splits in the articles, etc. - let one of the folks in the box below know.

We still (always) need material. I've included a short paragraph below, discussing the format for submissions. The bottom line is, if you were interested in something, then others in the club are also interested in the same thing - and the best way to contact those folks is to write a piece in the newsletter.

ORDERS ETC.

If you got in on Jules' offer for new SYNC subscriptions, you may pick up your complimentary copy of the Nov/Dec SYNC at the next meeting. The regular subscription will still start with the Jan/Feb issue.

If you paid for a copy of The Essential Guide to Timex/Sinclair Home Computers, you have one more chance to pick it up. All copies that haven't been picked up by the end of the Dec. 10 Meeting will be donated to the door prize fund.

THE MEMBER SURVEY

Twenty-eight copies of the survey have been returned. That's 25%: not a bad rate of return, but that also leaves 75% of CATS members that haven't taken the time. If you want your voice to be heard, get a copy of the survey (Nov newsletter) filled out and back to me - either at the meeting on Dec. 10 or by mail before December 26.
I'll print a tabulation of responses in the January newsletter.

Thanks for your continuing help and encouragement.

Mark Fisher

Dear Editor:

Just received your fine newsletter, and would like to comment:

1. "A Truly Portable Sinclair/Timex" by Les Solomon, from August 1983, Computers and Electronics. I've been struggling with this circuit for about three months. It works, no doubt. I have had less "crashes" when everything is working, but, let's examine the 6V Polaroid Battery. My computer accepts 12V without load. It's Ser. No. T 087443 and operates from a power supply (provided after purchase by Timex) and listed as 9V 1.5 A.output, but puts out 12V when measured without load. My machine will not work on 6V, but works well on 2 Polaroid batteries, but it runs them down rather fast. Another problem. By the time my Polaroid batteries are "available" they're about 1/2 out of date. To collect 2 takes

Continued on p.4

SUBMISSIONS for this newsletter are eagerly solicited. The primary function of this newsletter is to serve as a method of communication between members: thus, when selecting material for each issue, first priority will be given to member's submissions. Publication of material does not transfer rights from the author; in fact, it may establish priority.

Submissions may be reviews, articles on applications, programming techniques, hardware, or anything else you can imagine. Pertinent articles from other publications will also be considered.

I would prefer material to be typed, single spaced, in 3¼" columns - but don't break your back: the Xerox dosen't really care.

NEWSLETTER TEAM

S.A. Baker
Ned Beeler
Paul Beverly
Mike Cohen
Audry Curnutt
Bob Curnutt
Mary Feldman
Mark Fisher
Sarah Fisher
Jules Gesang
Gyuri Grell
Mihaly Grell
Don Mayes
Walt Sillars
Lloyd Unsell
Stew Vance
Jim Wallace

1984 MEETING and NEWSLETTER DEADLINE

	Meeting	Newsletter Submission
January 1984	14th	December 26,1983
February1984	11th	January 23,1984
March 1984	10th	February 20,1984
April 1984	14th	March 26,1984
May 1984	12th	April 23,1984

A MESAGE FROM THE PRESIDENT

I want to thank all of you for taking the time to fill out the SURVEY forms.

Now with the advent of the TS 2068, knowing what's wanted and needed for the meetings will become increasingly difficult.

But with the SURVEYS and other written comments, I don't see any reason why the meetings can not continue to be interesting and informative.

And of course, without your support.....

THE MEETING

During the last two meetings several people had requested floor time. Most unfortunately it had to be denied them due to the timing of the agenda.

I believe the main problem is me. By not making clear, the process for gaining access to the floor, I have caused undue frustration to IMPORTANT people with IMPORTANT things to say.

For that inexcusable oversight, I APOLOGIZE to all, (the people involved and the membership).

I invite those people, through the process listed below, to reapply for the floor time you so justifiably deserve and are entitled to.

FLOOR TIME

1. Information from the SURVEYS is correlated and reviewed to see what the membership wants

2. On a continuing basis people are making known, to the executive committee, subject matter they are willing to talk about

3. From the pools of information in items 1 & 2, an agenda starts to take shape for the next meeting

4. Once floor time is committed to someone, it is only fair to ensure they will have that time to tell their story

Now the problem is, how to invoke the provisions of ITEM # 2.

Recomended:

1. Call a committee member detailing the item you would like to talk about

2. Notify a committee member during a monthly meeting of your intentions

3. Call me personally at 441-4685

YOU SHOULD:

a) have a written outline of your talk for review

b) have timed your talk to fit within a 15 minute time frame

c) be willing to be patient. Some times we have more speakers than floor time

d) be willing to take constructive criticism

e) be willing to meet with the executive committee to explain your talk

I hope these simple guidlines help reduce future misunderstandings and produce even more people who want to share their discoveries with the membership.

FINAL FOOTNOTE

Your continuing support is is absolutely required for the success of our club.

THANK YOU....NED

Notes from the Librarian

I have started the Library program,with the program list sent to me by members. As of Nov.21 I have received only 9 lists and wish to thank the people who sent them.
They are Ellen Rogers, Stew Johnson, Michael N. Cohen, John R. Flanagan, Wayne Keysen, Rick White, Stew Vance, Mark Fisher, and Michael L. Cohen the Librarian.

Out of these nine people I have received 46 programs in the section Business Household and Education. They range from Filing to Word Processing,Financial to Math problem solving.
I also received 20 Game programs.
There are many interesting programs listed, but it is up to you the membership to decide were we go from here.
I have some more work to do on the list but a copy will be avalible at the next meeting.There I will trade you a copy for your program list.

Michael L. Cohen 270_5991

(continued from page 1)does itself. The last person in the chain of distribution is the person or persons that have produced Software and Hardware to supplement the use of the ZX81,TS1000 and TS1500. These are the people that have been stepped on. When Timex announced the coming of the TS2068 they were asked by at least 100 peripheral manufacturers for details of the operating system so they could write software and develop interfaces for printers, floppy discs, modems,and other sundry items to support the machine. It has been a year since the TS1000 hit the U.S. marketplace but as of last July there were at least 200 manufacturers of these peripherals supporting the machine. That is not to forget the writers and authors of the splendid books and articles they have published on the TS1000 and TS1500. There are several good books in the marketplace now about the TS2000 type machine, but they are takeoffs on the U.K. Sinclair manufactured SPECTRUM. The two machines are not compatible.

I am at a loss to understand where Timex is going in this marketplace. I have yet to get a clearcut picture of whether there is an overall plan of what Timex is doing. Is it a hit or miss type of operation that lets things take care of themselves?Hoping if problems are ignored they will go away.

Over the past year I have made suggestions to Timex regarding the contact with user group. But to no satisfaction ; all has been ignored. I am not alone in this frustrated situation. There are many other User Group members across the country that have the same feeling. But we carry on in our small way in spite of, not because of Timex.

To sum up: I guess the real reason we go on in spite of all the negatives is because we enjoy what we are doing with the Timex machines. It has such potential. We have found this out in using the ZX80, ZX81, TS1000, TS1500 and now the SUPER TS2068.

In addition there are some wonderful people we have met from all over the U.S. and from overseas who get the same thrill of using the equipment. There were times we visited with Mom and Pop operations in a garage or barn as well as large firms employing hundreds of people. All these folks were turning out Software and Hardware to support the Timex Computers.

Last but not least, I would be shortchanging the PRESS if I did not mention SYNC MAGAZINE, TIMEX SINCLAIR USER MAGAZINE and SYNTAX for the wonderful job they do of dedicating their publications to the ZX/TS machines. In addition the hundreds of User Groupnewsleters that turn out 1 page to 20 pages of wonderful material each month. Even TIMEX COMPUTER CORPORATION with its TIMEX CLUB RAMBLINGS is important to keeping the Timex public informed with timely information.

Let me close here by WISHING YOU ALL A HAPPY HEALTHY NEW YEAR, HAPPY COMPUTERING in 1984.

JULES GESANG

Continued from p. 2

longer. I contemplate a gel-battery of 9V output, but haven't paid the bill yet. Any suggestions?

2. Look on Radio Shack catalog, page 121, Item "M Remote On/Off Switch, $3.99." Great to plug into wall, then plug TV, Timex, and tape recorder into it, then turn off and on from 15 feet from wall plug. Beats in price the expensive on/off switches sold as add-ons for Timex.

3. Has anyone tried the Radio Shack "Voltage Spike Protector - 61-2790, $9.95"? My power is both "spike-ey" and tending to fade, so I need both battery back-up and spike protector. Up to now I can't find the protector in any Radio Shack in my area. Know where they can be found? My daughter, in Denver, says she uses one and it protects needle-bending surges hitting the Electrocardiographic runs.

Keep up the good work. I'm letting it grow on me.

-- STEW VANCE --

TRICK OF THE DAY

The flashing prompter:

INPUT NUMBER

During the last meeting we reviewed how to make the prompter flash.

Listed below is a simple program to create a flashing prompter.

```
10 PRINT AT 21,0;"INPUT NUMBER
";
20 FOR J=1 TO 80
30 IF INKEY$<>"" THEN RETURN
40 NEXT J
50 PRINT AT 21,0;" (14 SPACES)
";
60 FOR J=1 TO 80
70 IF INKEY$<>"" THEN RETURN
80 NEXT J
90 GO TO 10
```

This program is designed to be a SUB-ROUTINE,placed just before your INPUT statement, thus:

```
1080 GOSUB 10
1090 INPUT J$
```

Now for the next meeting, I would like to see the membership experiment with this program.

The idea is to see if we can create a more efficient version.

NOTE: This is a group participation activity; no exceptions. The argument-I have a 2068 that flashes automatically -will not be accepted.

During the tutorial segment of the meeting, we'll take about 15 minutes to develope a super prompter program for the TS 1000 and 1500.

THANKS TEAM.....NED

VU-CALC

If you use a spreedsheet program such as VisiCalc or SuperCalc.
There is a users'group for calc people calles ''Intercalc''The Intercalc people publishes its own newletter of hints and techniques.
You can contact them at Intercalc, Box 254,Scarsdale,N.Y.10583

Helpful Hint From Harry Hacker

Often when Programming we use a "Boot-UP" routine to have the Program start automatically. This is espeCially useful when we have stored variables in the Program which would be cleared by any use of "RUN".

The routine is:

```
9990 SAVE "Program name"
9991 CLS
9992 GOTO 100
```

The line numbers are selected to fit in your Program and can be located anywhere.
Of course, what happens is that we bury the SAVE command somewhere and then forget exactly where.
The solution is; introduce one more variable←LET SAVE = 9990. Then when we want to save the Program we can use "GOTO SAVE" and we avoid racking our brain or rotting our eyes in search of the save routine.

If you have a helPful hint for old Harry send it in to CATS NEWSLETTER. A free windshield wiPer for your comPuter will be your reward if Old Harry thinks you deserve it.

→→→→→→→→→→→→→→→→→→→→→→→→→→→→→→→→→→→

FAST GRAPH

The following program is reprinted from the Z-West newsletter, of Vista, CA, with permission. No author is given – I assume that it was written by the publisher, Gordon Young.

"This month's presentation is a graph subroutine you can incorporate into your own program. This one is not in BASIC and will be printed onto your screen in about one second! The "Example" program will give you an idea of how it works (in BASIC).

You first need to reserve at least 215 bytes of memory for the machine code routine. This is easily accomplished by entering: 1 REM (followed by 215 characters [spaces, periods, numbers, anything!]). It is a good idea to do this in FAST mode. Keep in mind that this must be line number 1 (one). When you have completed line one, enough memory has been reserved to enter the machine code routine, and now you need a simple assembler program to enter the MC code numbers. Figure#1 is a program to do the entering of the numbers. You can now type RUN and begin entering code numbers from the listing. Enter the listing from left to right (top to bottom). When all the numbers have been entered, break out of the assembler by entering any letter to give an error report. Press ENTER once again and the computer will return to the program listing. Now, remove lines 2 through 12 and get rid of the assembler. SAVE the program so far (a crash will require you to start all over!). Your BASIC listing should now look something like figure #2. If everything has gone well so far, you can run the routine by entering RAND USR 16514 (& ENTER). The bar graph should now appear on your screen. If not, you better start checking your entries! It should look like that of figure #3.

Enter the rest of the BASIC "EXAMPLE" program and try it out. There are some small limitations you must take note of. You can enter 12 pieces of data to represent each month. The addresses that recieve this are: 16582-16593, so when you make use of the program, use these addresses to POKE your data into. Another important aspect of this routine is that data must be a number between 1 and 18. This means you will have to scale your data down to fit. Zero and 19 will cause the program to crash!

Room has been made to the right of the graph so that you may print levels of values down the side. You can see that there are nine horizontal divisions. Here again, you will have to scale the highest value to the ninth division (18). Although these small drawbacks require extra BASIC programming, the speed of this routine will make up for this problem.

If you are a new ZX/TS user, and have not had the chance to see how fast assembly language programming [sic.] is, this is a good example.

Z-WEST, September, 1983, 2(9), 3-4.

FIGURE #1

```
   1 REM .........................
...............................
...............................
...............................
...............................
...............................
...............................
   2 FOR N=16514 TO 16730
   4 INPUT A
   6 POKE N A
   8 PRINT AT 21,4;N,TAB 10;A
  10 SCROLL
  12 NEXT N
```

BASIC "EXAMPLE" PROGRAM

```
   1 REM ■D E£RND2▒Y/770-X RETUR
N  4 SAVE GOSUB ?1? RETURN  4 GO
SUB 2<■5 E£RND▒/ SAVE Y■?1? RETU
RN  4 INPUT ::Y■?$7? RETURN  4 P
LOT />$£■■▒)?■■ ■▒"(LEN RND?■  GO
SUB ?ABS RND▒MCHR$ RND??< GOSUB
?ABS RNDUCHR$ RND? GOSUB ?USR RN
DE£RND▒Q▒■5  GOSUB PI1? RETURN
4 NEXT GOSUB ?USR RND■■ GOSUB ?U
SR RNDUVAL RNDXMVAL RND RETURN ■
4?Y$MVAL RND■LEN RND GOSUB ?ABS
RND■?■ GOSUB ?USR RNDY MCHR$ RND
E£RND)■■ GOSUB ???■* 5RNDINKEY$
GOSUB ■/±J F M A M J J A S O N D
TAN
   2 PRINT "PRESS ANY KEY FOR A
SAMPLE OF"
   3 PRINT TAB 8;"THIS GRAPH."
   4 IF INKEY$="" THEN GOTO 4
   5 CLS
   6 GOTO 11
   8 SAVE "GRAP■"
   9 RUN
  10 STOP
  11 RAND USR 16514
  12 FOR N=1 TO 250
  13 NEXT N
  14 CLS
  15 PRINT TAB 10;"ENTER DATA"
  16 FOR N=1 TO 12
  17 INPUT A
  18 IF A<1 OR A>18 THEN PRINT
DATA OUT OF RANGE"
  19 IF A<1 OR A>18 THEN GOTO 17
  21 POKE (16581+N),A
  22 PRINT A;" ";
  23 NEXT N
  24 CLS
  25 GOTO 11
```

FIGURE #2

SECTION 1

1	41	0	42	12	64
30	9	62	24	35	35
54	22	61	254	0	32
248	237	74	29	123	254
0	32	237	30	19	1
33	0	42	12	64	9

SECTION 2

126	254	116	32	3	35
24	248	62	5	119	29
123	254	0	32	238	14
25	62	3	119	13	35
121	254	0	32	246	24
18	13	12	2	6	9
17	15	3	5	2	3
11	18	198	64	64	2
0	237	75	210	64	10
50	214	64	80	69	19
237	83	210	64	58	214
64	95	237	75	212	64
42	12	64	9	54	136
1	33	0	237	66	22
123	254	0	32	240	237
75	212	64	3	3	237
67	212	64	58	197	64
61	50	197	64	254	1
32	195	62	13	50	197
64	1	195	64	237	67
210	64	1	64	2	237
67	212	64	62	0	50
214	64	42	12	64	17
150	2	237	90	64	93
1	83	0	33	64	65
237	176	24	23	47	0
43	0	50	0	35	0
50	0	47	0	47	0
38	0	58	0	52	0
51	0	41	201		

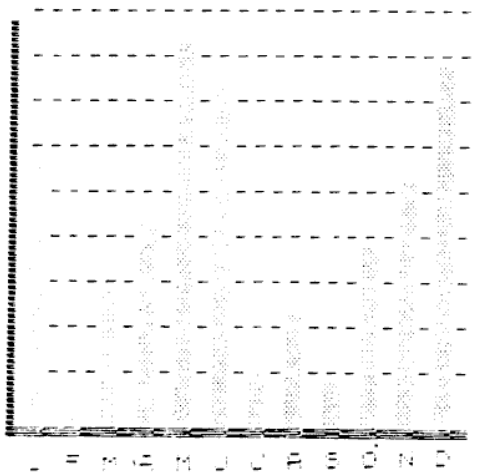


Fig. 3

PRINTING WITH STYLE: A PROWRITER REVIEW

New equipment is one of the things that is closest to the heart of a computer hobbyist - and I recently was able to get acquainted with a particularly endearing piece of equipment. Unfortunately, it's on loan; and I'm already thinking of the sad day when I'll have to wave good-bye. The device is C. Itoh's Prowriter - and I've been using it for every written product I've generated since I got it going.

By itself, it is a moderate sized biege box, with a telltale platen and paper slots to indicate its function, and three buttons on its front panel. When it's installed in the place of the Timex 2040 printer, its true size becomes apparent - I had to clear some extra space to fit it in: along with its supply of paper, it covers an area equal to <u>eight</u> T/S 2040's.

<u>GETTING IT GOING</u>

Setup is straightforeward; plug it in, plug in the cable from the Centronics interface, and turn it on. A reassuring clunk-clunk-clunk announces that it's awake. Turn it on again, holding down the TOF (top of form) switch, and the print test starts up - whee ! Now back to serious work. There are 16 switches that have to be set to let the Prowriter understand the Timex/Memotech. Slow work; the terminology is unfamiliar, and each switch controls a different aspect of the relations between the two machines. Fortunately, Tom Woods has published a switch pattern for the Timex, and that got me started.

Now for the first real test: LPRINT "HELLO". Nothing happened ! Oh yes, the SEL (select - e.g. recieve message) light must be on. A tap of the SEL key, and the SEL light comes on; now LPRINT works. The next step is to get a program to control the LPRINTs - Z-TEXT was the obvious choice, as its 100% BASIC code would allow easy modification to allow for the quirks of the Memotech interface. The interface sends out ASCII upper case when it sees Sinclair normal video: leading to normal looking program listings. To send out lower case, one must use inverse characters. Not impossible, but most writing is in lower case, leading to an annoying screen display. I was able to add a line that flopped each character from inverse to normal or vice versa, before it was sent to the printer. A second problem came up: each capital letter required two GRAPHICS shifts, and constant vigilance that an inverse period was not left in the text (that's Memotech's flag for the special ASCII control characters).

In addition, I was typing on a full size keyboard (read FAST) while the Sinclair INPUT routine was optimized for the membrane keyboard (read SLOW). It was time for machine code. I got started on a typing utility, but then I got an advance copy of WSII. It is designed for the 2040 printer, but the text handling and entry module is separate from the printer driver. It was thus possible to modify the printer driver to work with the Memotech interface, while retaining the smooth key action and natural CAPS shift of the original. That's when this project took off - leading to this review, among other things.

<u>PRINTER FEATURES</u>

The Prowriter is a VERY complex machine. You can get some idea of this by the fact that it has more ROM than the Timex! Filling all that space are a f i x e d p i t c h c h a r a c t e r s e t , a proportional pitch character set, a greek χΦΨτωχΦ στυΦυ, and a graphics ⫤♠⊧⁞ ⊨–◣⁞_–◣–. As you can see, each is very legible - DOT MATRIX dosen't scream at you as it does from some older or cheaper designs. My professors found no diffuculty in accepting papers printed on the Prowriter.

Character sets are only one part of the Prowriter's abilities. <u>Every</u> aspect of the machine is under electronic control, and the user can change these at will. Both horizontal and vertical tabs can be set up, text can be compressed or e x p a n d e d , <u>underlined</u> or **boldfaced.** Line feed can be adjusted big,

as this line here is,

or little, as this line shows; even reversed! (I won't show that - it's too hard to read). Individual pins can be controlled, making it capable of printing hi-res images covering an entire sheet (or box, if you had the memory) of paper, at a resolution of 1440 x 1280 pixels.

Mechanically, the Prowriter is either friction or pin feed, and can be adjusted for paper thickness and impression strength.

<u>CONCLUSIONS</u>

As you may have guessed, I like it. I sometimes wish it had an italics option, as some other printers do. Print quality is excellent, without sacrificing the flexibility of a dot matrix system. A daisy wheel printer would be better at printing fine, carefully sculptured letters - I wouldn't use this to do a thesis for Harvard. But the bottom line is, its fast, simple, and flexible; an excellent value.

Mark Fisher

PLANNING A TRUST

As I noted the snow on the peaks of the attendees at the last meeting I was moved (by the plea for Newsletter items) to respond with a little program I wrote some time ago when a grandchild was born. This permits planning for a sum of money more than a decade in the future, adjusted for (estimated) inflation figures. Your guess is as good as mine of average inflation over the upcoming years, but we can all guess. If you follow the progress of the Fund, you can make adjustments. Run it several times with various assumptions, you will be surprised at the outcomes. I am not a registered financial analyst, so I can only say I invest for my grandkids in an Equity Mutual Fund which has averaged 25 per cent growth for the past ten years. (Before we leave, I can also say that my children use this program in future planning for the kids' education, etc.) Oh, and the algebraic formulae come from my daughter's "Business Math" book from her college. Any smart business calculator can do the same thing, but not all in one package.

-- STEW VANCE --

```
   1 PRINT "          ESTABLISH GIFT
TRUST"
   2 PRINT
  10 PRINT "1. ENTER DESIRED AMO
UNT OF FUND AT TODAYS VALUE. ";
  20 INPUT A
  22 PRINT "$";A
  30 PRINT "2. ENTER YEARS TO MA
TURITY.";
  40 INPUT B
  42 PRINT B;"YRS"
  50 PRINT "3. ENTER ESTIMATED A
NNUAL INFLATION RATE NEXT ";B;"
YEARS.";
  60 INPUT C
  62 PRINT C;" O/O"
  70 LET D=(((C/100)+1)**B)*A
  72 PRINT
  80 PRINT "4. THE TARGET AMOUNT
 IS $";INT D
  82 PRINT
  90 PRINT "5. ENTER AMOUNT AVAI
L. TO INVEST NOW.";
 100 INPUT E
 110 PRINT "$";E
 120 PRINT "6.ENTER TOTAL ANNUAL
 YIELD (GROWTH + DIVIDENDS) YOU
EXPECT OR WILL SEEK ";
 140 INPUT F
 150 PRINT F;" O/O"
 155 LET F=(F/100)/12
 160 LET G=E*(F+1)**(B*12)
 165 LET H=(D-G)*(F/(((1+F)**(B*
12))-1))
 167 PRINT
 170 PRINT "SINKING FUND STARTIN
G WITH       DEPOSIT OF $";INT E;
" AND DEPOSITING";"$";INT H;" EA
CH MONTH WILL REACH","TARGET OF"
;"($";INT D;") AT END OF ";B;" Y
EARS."
 180 STOP
```

```
            ESTABLISH GIFT TRUST

1. ENTER DESIRED AMOUNT OF FUND
AT TODAYS VALUE. $10000
2. ENTER YEARS TO MATURITY.16YRS
3. ENTER ESTIMATED ANNUAL INFLAT
ION RATE NEXT 16 YEARS.7.5 O/O

4. THE TARGET AMOUNT IS $31807

5. ENTER AMOUNT AVAIL. TO INVEST
 NOW.$500
6.ENTER TOTAL ANNUAL YIELD (GROW
TH + DIVIDENDS) YOU EXPECT OR WI
LL SEEK [illegible]

SINKING FUND STARTING WITH DEPOS
IT OF $500 AND DEPOSITING $33 EA
CH MONTH WILL REACH TARGET
$31807 AT END OF 16 YEARS.
```

UNCLASSIFIED

FOR SALE* 2-cassette recorders, Lafayette RK-85 & 86, both have problems. Good for tinkering around with. Cronus electronic digital 5-function stop watch. Make offer, Wayson Lee 362-2068

STARGAZE WITH YOUR TIMEX SINCLAIR
by Don Mayes

This program was derived from a 16K RAM version and compacted to fit a standard computer without the use of a RAM pack. A few notes should be made: K1, K2, and K3 are constants. K1 changes each year -- see the K1 Constants chart to figure out which one to use. LONG is your longitude in decimal hours. TZ is the difference in hours between your time zone and Greenwich. GMST is Greenwich Mean Sidereal Time and LMST is the Local Mean Sidereal Time.

To calculate the day of the year which is needed in the sidereal time program add the day of the month to the following monthly base numbers: January 0, February 31, March 59, April 90, May 120, June 151, July 181, August 212, September 243, October 273, November 304, December 334. Remember that in leap years you increase the day number by 1 for all dates after February.

This program listing is actually three separate programs that have been stringed together and all REM statements were deleted to make this program as compact as possible. As it turned out, there is still plenty of room left to make additional changes or modifications left up to the user's delight. I left lines 0 through 9 blank in the beginning of this program to allow room for one to construct some sort of menu or subroutine to select or default to a particular subprogram within the main body. It should be noted that the variables in the three separate subprograms are not linked with each other, meaning you may have to remember the output of the sidereal time routine and plug the values in the next set of computer prompts. This is not much of a problem if you have good short term memory as most people do. The entry points for each of the three programs are line 10 for Local Mean Sidereal Time, line 32 for Right Assensition and Decimal Calculation, and line 59 for Altitude/Azimuth Conversion. The K1 constants are listed in the table below.

K1 Constants

	1983	6.60649392
*	1984	6.59057904
	1985	6.64037496
	1986	6.62446008
	1987	6.60854592
*	1988	6.59263200
	1989	6.64242696
	1990	6.62651304
	1991	6.61099792
*	1992	6.59468400
	1993	6.64447896
	1994	6.62856504
	1995	6.61265112
*	1996	6.59673600
	1997	6.64653192
	1998	6.63061704
	1999	6.61470312
*	2000	6.59878800

The * denotes leap years and also note that the LAT, LONG, and TX variables for example may be set for a geographical location other than where you live to check on the correct variables where you will be setting up shop. A good place to check is the local college or university Astronomy Department. Also the local library has lots of Geo. tables for star buffs.

Editor's Note: In case you haven't noticed, my monthly column has been called off lately due to a few weeks vacation and also I was in the process of moving to a new residence. Now that things are somewhat back to normal I will have more time to devote to Hardware/Software projects. Upcoming projects include how to construct a simple light pen minimizing hardware and making strategic use of software to do the job. A light pen is a device that allows you to select menu choices right from the monitor screen without touching the keyboard.

I hope that all of you will find this challenging and helpful in your quest for bigger and better adventures in the computing power of your Timex/Sinclair. If any bugs or errors pop up, please feel free to address them to me or slip a correction notice in the monthly newsletter. This program is copyrighted, and is intended for free distribution via

tapes or listings to all who wish to use it. Modifications or corrections during distribution are solicited.

Happy Gazing

Donald Mayes, Jr.
New Twisted Pair
589-4190

```
0--------------------
1
2
3
4
5     Your menu here
6
7
8
9----------------------
10 LET K1 = 6.60649392
11 LET K2 = .0657098232
12 LET K3 = 1.0027379093
13 LET LONG = 5.1234
14 LET TZ = 5
15 PRINT " DAY OF THE YEAR " ;
16 INPUT D
17 PRINT " LOCAL TIME (HOURS) ";
18 INPUT H
19 PRINT " LOCAL TIME (MINUTES) ";
20 INPUT M
21 PRINT " LOCAL TIME (SECONDS) ";
22 INPUT S
23 PRINT
24 LET SDT = H+(M/60)+(S/3600)
25 LET UT = SDT+TZ
26 LET GMST = K1+(K2*D)+(K3*UT)
27 IF GMST>24 THEN GMST=GMST-24:GOTO 27
28 LET LMST = GMST-LONG
29 PRINT " LOCAL MEAN TIME = "; SDT
30 PRINT "              GMST = "; GMST
31 PRINT "              LMST = "; LMST
32 LET LAT = 40.1234
33 LET RAD = 57.295775135
34 PRINT
35 PRINT " ALTITUDE " ;
36 INPUT ALT
37 PRINT " AZIMUTH " ;
38 INPUT AZ
40 PRINT " LOCAL SIDEREAL TIME (DECIMAL HOURS) ";
41 INPUT LMST
42 LET A = ALT/RAD
43 LET AZR = AZ/RAD
44 LET L = LAT/RAD
45 LET D = (SIN(A)*SIN(L))+(COS(A)*COS(L)*COS(AZR))
46 LET DC = ATN (D/SQR(-D*D+1))
47 LET H = (SIN(A)-(SIN(L)*D))/(COS(L)*COS(DC))
48 LET HC = -ATN(H/SQR(-H*H+1))+1.5708
49 LET DEC = DC*RAD
50 LET HA = HC*RAD
51 IF FLAG = 1 GOTO 330
52 IF SIN(HC)>0 THEN HA=360-HA
53 LET HAH = HA/15
54 LET RA = LMST-HAH
55 IF RA<0 THEN RA = RA+24: GOTO 55
56 PRINT
57 PRINT " RA= ";RA
58 PRINT " DEC= ";DEC
59 LET LAT = 40.1234
60 LET RAD = 57.295775135
61 PRINT " RA (HOURS) " ;
62 INPUT RH
63 PRINT " RM (MINUTES) ";
64 INPUT RM
65 PRINT " RA (SECONDS) ";
66 INPUT RS
67 LET RA=RH + (RM/60)+(RS/3600)
68 PRINT
69 PRINT " DEC (DEGREES) ";
70 INPUT DD
71 PRINT " DEC (MINUTES) ";
72 INPUT DM
73 PRINT " DEC(SECONDS) ";
74 INPUT DS
75 LET DEC=DD+(DM/60)+(DS/3600)
76 PRINT
77 PRINT " LMST (DECIMAL HOURS) " :
78 INPUT LMST
79 PRINT
80 LET HA = LMST-RA
81 LET HAD = HA*15
82 LET L = LAT/RAD
83 LET H = HAD/RAD
84 LET D = DEC/RAD
85 LET A = (SIN(D)*SIN(L))+(COS(D)*COS(L)*COS(H))
86 LET AA = ATN(A/SQR(-A*A+1))
87 LET ALT = AA*RAD
88 LET AZ = (SIN(D)-(SIN(L)*SIN(A)))/(COS(L)*COS(A))
89 LET AZA = -ATN(AZ/SQR(-AZ*AZ+1))+1.5708
90 LET AZM = AZA*RAD
91 IF SIN(H)>0 THEN AZM = 360-AZM
92 PRINT "        ALTITUDE = "; ALT
93 PRINT "        AZIMUTH = "; AZM
```

On Mihaly Grell's high resolution plotting program (Newsletter, Vol. 1, No. 6) I added the following statements so you get a screen print out. The question I have, is there anyway you can plot high resolution graphics on screen with the ZX81 and the 16K memory module?

```
181  Let X1 = X/15
182  Let X1 = Y/10
185  Print at Y1, X1; "."
```

Funny you should ask. Mr Grell is also interested in the same question - but no results so far. Others have made more progress though - see below.

MF

PS. I lost the name of the author of the above letter. You can help by putting your name on each sheet submitted (please?).

HANG MAN & BOGGLER

Most "computer games" derive their attraction from the speed and animation that can be programmed in. Who can forget their first glimpse of Astroids - with random rocks sliding gently across the screen ! Unfortunately, that feeling of awe is soon reduced to familiarity. There are some games that do not depend on whizzing spaceships for their interest: and we have two of them here. Putting these on a computer is not just an idle exercise; one of the uses for a computer is as an impartial arbiter. In these games, the computer keeps track of the hidden information, and tells each person how they're doing.

HANGMAN
2K RAM

The instructions for this one aren't included in the listing - in 2K, there just isn't room. I'm rather proud of the method of printing the man on the screen piece by piece - note that just one return handles all the possibilities.

RULES

One player enters his word into the machine. The machine takes it, and puts up a string of *'s the length of the word. The other players then return, and guess letters. The computer keeps track of wrong guesses, and lists them under the word. If a letter is contained in the word, it is put in its correct position. The round is over either when the man falls, or the word is guessed.

BOGGLER
16K RAM

Lloyd Unsell just wrote this computerized version of Parker Brothers' Boggle. In many ways, it is a better game for all players than the original. I added a READ subroutine, and used it four times in the program to reduce the repetitive typing of LET statements. Perhaps you can use the READ subroutine in your own programs.

RULES

Since this is a 16K program, there is plenty of room for instructions to be included in the listing itself. The game requires two to six players, each with pencil and paper. The game procedes in rounds, with points gained in each round, until one person reaches some pre-determined limit (say, 50 pts.). Words are built up from adjoining dice, with no die being used more than once in each word. The following words can be found in the sample screen (I took more than three minutes to get this list, and there are probably more).

LAM, MASK, MASS, MAKE, MAKER, LAKE, RAKE, RAKER, SAKE, LAME, RIM, REAL, REAR, REAM, GEE, ROAM, ROAMER, MIRE, RIME, VEAL, SAME. RAM, MIKE.

The following words are NOT legal:

ALSO (not in sequence), GAS. SAVE, SAM (proper name), MERE (same die used twice).

There you are: two word games that can provide you and those around you with some real fun

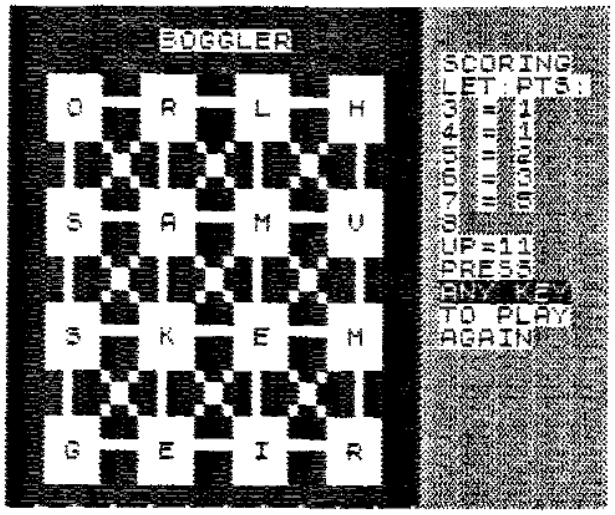
Mark Fisher

WHAT LETTERS ARE IN IT?

PARA*I**ORO*EN*ENE

U Y S T M O S U W X K

```
  5 CLS
 10 PRINT TAB 8;"H     M     "
;TAB 8;"  A   G   A  ";TAB 8;"  N       N"
 20 DIM B$(1)
 30 LET X$="N"
 40 LET Y=10
 50 PRINT TAB 7;"ENTER YOUR WOR
D"
 60 LET F=9
 90 INPUT A$
100 PRINT AT 3,4;"WHAT LETTERS
ARE IN IT?";,,
110 FOR N=1 TO LEN A$
120 PRINT "*";
130 NEXT N
140 DIM C$(LEN A$)
200 INPUT B$
210 FOR N=1 TO LEN A$
220 IF A$(N)=B$ THEN GOSUB 300
250 NEXT N
260 IF C$=A$ THEN GOTO 700
270 IF X$="N" THEN GOSUB 400
280 LET X$="N"
290 GOTO 200
300 PRINT AT 5,N-1;B$
310 LET C$(N)=B$
320 IF A$(N)=B$ THEN LET X$="Y"
330 RETURN
400 PRINT AT 7,(10-Y)*2;B$
410 GOSUB 500+Y*10
420 LET X$="N"
430 LET Y=Y-1
440 IF Y>-2 THEN RETURN
450 PRINT AT 16,0;"THE WORD WAS
";A$
455 FOR F=9 TO 18
460 GOSUB 500
465 PRINT AT F,10;"    "
470 NEXT F
475 PRINT AT 18,11;"▩";
480 GOTO 710
500 PRINT AT F+1,12;"▩"
510 PRINT AT F+1,10;"▩"
520 PRINT AT F+2,11;"▩"
530 PRINT AT F+2,10;"▩"
540 PRINT AT F+1,11;"▩"
550 PRINT AT F,11;"O"
555 IF Y=-1 THEN RETURN
560 PRINT AT 8,11;"▩▩"
570 PRINT AT 9,13;"▩"
580 PRINT AT 10,13;"▩";TAB 13;"
▩";TAB 13;"▩";TAB 13;"▩"
590 PRINT AT 14,12;"▩▩"
600 PRINT AT 15,10;"▩▩▩▩"
610 RETURN
650 SAVE "HAN▩"
660 RUN
700 PRINT AT 18,0;"YOU GOT IT."
;
710 PRINT " DO YOU WISH TO TRY
AGAIN?"
720 INPUT C$
730 IF C$(1)="Y" THEN RUN
```




```
  10 REM    *********
            *BOGGLER*
            *********
     (C)1983 BY L. UNSELL
        301-420-9082
  20 LET READ=60
  30 POKE 16418,1
  40 FAST
  50 GOTO 160
  60 REM *** READ SUBROUTINE ***
  70 FOR A=1 TO LEN D$
  80 IF D$(A)="," THEN GOTO 100
  90 NEXT A
 100 LET R$=D$( TO A-1)
 110 LET D$=D$(A+1 TO )
 120 RETURN
 130 REM *** READ BOARD SUB ***
 140 FOR A=1 TO 23
 150 PRINT B$(A);C$
 160 NEXT A
 170 RETURN
 180 REM *** SET UP ARRAYS ***
 190 DIM A$(16,7)
 200 DIM B$(23,22)
 210 GOSUB 9000
 220 FOR B=1 TO 16
 230 GOSUB READ
 240 LET A$(B)=R$
 250 NEXT B
 260 GOSUB 9020
 270 FOR B=1 TO 6
 280 GOSUB READ
 290 LET B$(B)=R$
 300 NEXT B
 310 GOSUB 9040
 320 FOR B=3 TO 23
 330 GOSUB READ
 340 IF R$<>"X" THEN LET B$(B)=B
$(VAL R$)
 350 NEXT B
 360 LET C$="                    "
 370 REM *** ROLL DICE ***
 380 RAND
 390 FOR A=5 TO 20 STEP 5
 400 FOR B=4 TO 19 STEP 5
 410 LET C=INT (RND*16+1)
 420 IF A$(C,1)="1" THEN GOTO 41
0
 430 LET A$(C,1)="1"
 440 LET D=INT (RND*6+2)
 450 LET B$(A,B)=A$(C,D)
 460 IF B$(A,B)="Q" THEN LET B$(
A,B+1)="U"
 470 NEXT B
 480 NEXT A
 490 SLOW
 500 GOSUB 130
 510 REM *** START TIMER ***
 520 PRINT AT 10,25;"3:00"
 530 FOR A=2 TO 0 STEP -1
 540 PRINT AT 10,25;A;":59"
 550 FOR B=58 TO 0 STEP -1
 560 IF B<10 THEN PRINT AT 10,27
;"0";B
 570 IF B<10 THEN GOTO 590
 580 PRINT AT 10,27;B
 590 FOR I=1 TO 3
 600 NEXT I
 610 NEXT B
 620 NEXT A
 630 PRINT AT 4,23;"TIME UP";TAB
23;"PRESS";TAB 23;"ANY KEY";TAB
23;"TO CHECK"
 640 REM *** BLANK SCREEN ***
 650 FOR A=0 TO 21
 660 PRINT AT A,0;B$(1)
 670 NEXT A
 680 IF INKEY$="" THEN GOTO 660
 690 REM *** RESTORE SCREEN ....
 700 PRINT AT 0,0;
 710 GOSUB 130
 720 REM ... END ADD SCORING ***
 730 GOSUB 9060
 740 PRINT AT 2,23;
 750 FOR B=1 TO 13
 760 GOSUB READ
 770 PRINT TAB 23;R$
 780 NEXT B
 790 IF INKEY$="" THEN GOTO 790
 800 CLS
 810 RUN
 820 SAVE "BOGGLE"
 830 PRINT ,,"          WELCOME TO
BOGGLER",,,"HIDDEN WORD GAME FOR
 2-6 PLAYERS",,"YOU WILL NEED PA
PER AND PENCIL  FOR EACH PLAYER.
",,,"OBJECT: TO LIST AS MANY WOR
DS ASYOU CAN FIND AMONG THE RAND
OM    ASSORTMENT OF LETTERS DISPL
AYED -WITHIN THREE MINUTES."
 840 PRINT ,,"(WORDS MUST BE FOR
MED USING     ADJOINING LETTERS
IN ANY DIR-   ECTION; VERTICAL,
HORIZONTAL,   OR ANY DIAGONAL. N
O LETTER IN   THE SAME SQUARE MA
Y BE USED MORETHAN ONCE. ONE AND
 TWO LETTER   WORDS DO NOT COUNT
."
 850 PRINT ,,"PRESS ANY KEY FOR
SCORING"
 860 IF INKEY$="" THEN GOTO 850
 870 CLS
 880 PRINT ,,,"SCORING: WHEN TI
ME IS UP, PLAYERWITH MOST WORDS
READS THEM OUT. ANY WORD THAT IS
 FOUND BY MORE  THAN ONE PERSON
IS CROSSED OFF  ALL LISTS. EACH
PLAYER IN TURN  READS OUT THEIR
REMAINING WORDS,AND THE SAME PRO
CESS IS REPEATED"
 890 PRINT ,,"REMAINING WORDS AR
E ASSIGNED A  POINT VALUE, BASED
 ON THEIR     LENGTH - A TABLE U
ILL BE DIS-   PLAYED.",,,,"A ROO
T AND IT'S PLURAL COUNT AS TWO W
ORDS. NO PROPER NOUNS, OR  FOREI
GN WORDS."
 900 PRINT ,,"PRESS ANY KEY TO S
TART."
 910 IF INKEY$="" THEN GOTO 910
 920 CLS
 930 RUN
```

Continued on page 16.

LISSAJOUS REDUX

The following interesting programs were sent by S. A. Baker of Arlington, Va.

He also wrote:

Dear Editors:

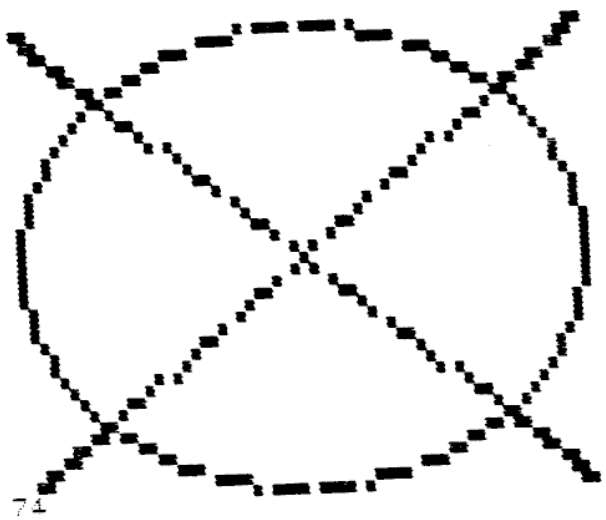
Recently many members of cats bought the paper back "The Essential Guide to Timex/Sinclair Home Computers." This book has on page 247 a program TRANSIM that is said to give a moving display. However, the display is stationary. To make it move, add line 265: 265 SLOW. then it works well.

The TRANSIM program is helped by two corrections. In line 400 change AT 7,13 to AT 7,12. Also, delete line 20 and replace with line 171: 171 PRINT "PRESS S TO STOP BASE CURRENT, R TO RESTART"

Enclosed are a couple of programs that may be of some interest to beginners who want some graphic displays for experiment. The "PATTERNS" is a variant of the LISAJOUS put out by Jim Wallace a while ago.

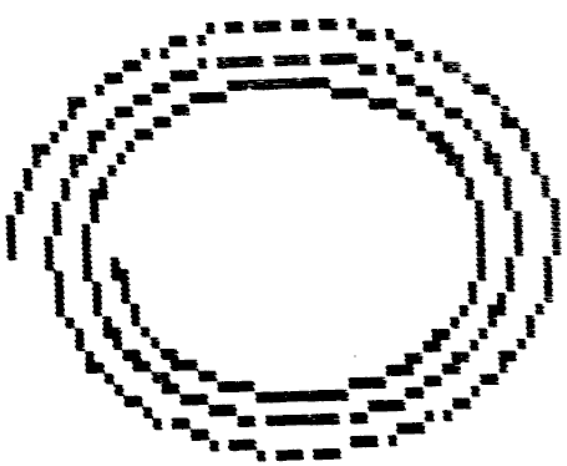
Many thanks to Mr. Baker. Helpful contributions such as this make our newsletter more worthwhile.

```
  5 REM "PATTERNS"
 21 FOR R=1 TO 5
 27 FAST
 30 LET S=PI/150
 40 FOR I=0 TO 2*PI STEP S
 45 IF R>5 THEN LET R=74
 48 IF R=75 THEN STOP
 50 PLOT 32+30*SIN (I-PI/2)/21+
20*SIN (R*I)
 60 NEXT I
 65 PRINT AT 21,0;R
 70 PAUSE 600
 80 CLS
 85 NEXT R
```



PATTERNS: TRY 30 LET S=.021

```
  5 REM "SPIRAL"
  8 REM K = NUMBER OF TURNS DES
IRED
 10 LET K=3
 13 REM S SPACES PLOTTING POIN
TS; CHOOSE .01<=S<=.10
 15 LET S= .05
 20 REM ZZ SETS PITCH
 25 LET ZZ = 1-.025*S
 30 LET KP = K*2*PI
 35 LET V=1
 38 FAST
 40 FOR I= 0 TO KP STEP S
 45 LET V = V*ZZ
 48 LET A = I-PI/2
 50 PLOT 30+30+V*SIN A,10+30+V*
SIN A
 60 NEXT I
```



SPIRAL: TRY 25 ZZ = .999 OR 30 S LOW OR 45 LET A = PI/2-I

AUTOPSY of a PROGRAM

Last month, I showed you several elements of a program's structure. This month, I'll present a subroutine (to be added to the end of an existing program) that takes advantage of that structure to help investigate the program in question.

The Greek root of autopsy refers to self-looking. A medical autopsy today investigates the state of the systems of a patient, following his death. It provides information that is not available any other way. This will only be a partial autopsy - only one aspect of the program will be examined. In our case, the patient is capable of getting up off the table after we're done with him, and working as hard as ever.

Last month I discussed the extra bytes that the Timex inserts after every decimal number in the program file. In a long program, hund reds of bytes can be taken up with these constants. A great deal of memory can be saved if commonly used numbers are replaced by constants - but which numbers occur often enough to be so replaced? It's easy enough to scan the list for commonly used numbers, but in a long program, many possibilities may be missed. The accompanying program will scan your program, and prepare a table of number use, showing numbers used and their frequency.

THE PROGRAM

```
9750 DIM D(204)
9760 FOR N=16509 TO 35000
9770 IF PEEK N<>126 THEN NEXT N
9780 LET N=N+5
9790 FOR L=N-6 TO N-30 STEP -1
9800 IF PEEK L<>42 AND (PEEK L<28 OR PEE
K L>37) THEN GOTO 9820
9810 NEXT L
9820 LET A$=""
9830 FOR L=L+1 TO N-6
9840 LET A$=A$+CHR$ PEEK L
9850 NEXT L
9860 IF A$="10101010" THEN GOTO 9960

9870 FOR L=2 TO 200 STEP 2
9880 IF VAL A$<D(L) THEN NEXT L
9890 IF VAL A$=D(L) OR D(L-1)=0 THEN GOT
O 9930
9900 FOR M=198 TO L-1 STEP -1
9910 LET D(M+2)=D(M)
9920 NEXT M
9930 LET D(L-1)=D(L-1)*(D(L)<>D(L+2))+1

9940 LET D(L)=VAL A$
9950 NEXT N
```

The program seperates into four segments.

9750-9770 The file array (D()) is set up, then the main search loop - exited when a 126 number marker is found.

9780-9810: The main counter, N, is set ahead of the binary part of the number, and the utility loop, L, is invoked and looped until it encounters a byte that is not a digit (E counts as a digit - do you know why?).

9820-9860 An image of the number is built up in A$, and is checked against the flag digit. The analysis will stop when it encounters this number, so you can insert it just ahead of this subroutine to avoid including the numbers in this subroutine in the overall count.

9870-9950 This is the filing routine; A$ is compared with the numbers already in D(), and the data in D() is moved up to make room if needed.

9960-9990 The display routine.

It is not necessary to create a variable for each number found - in this case, variables for 1 & 200 would save perhaps 85 bytes. Numbers can be economically expressed using combinations (I+I=2, if I=1 for example)

This process of leafing through the program file can be used in many instances. If there is interest, I will discuss my line renumbering subroutine next month.

Mark Fisher

```
9960 FOR L=2 TO 204 STEP 2
9970 PRINT D(L-1);"--";D(L)
9980 NEXT L
9990 LET L=10101010
```

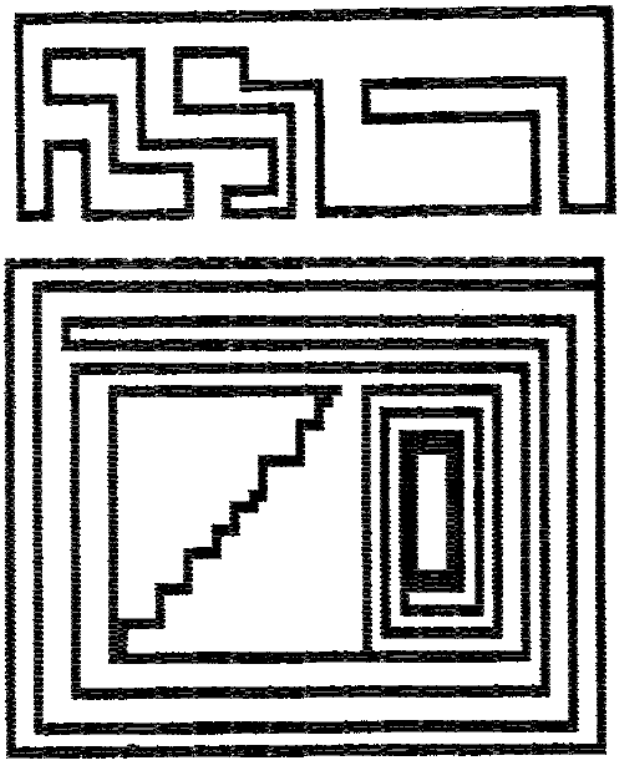
```
1--35000
1--16509
1--9960
1--9930
1--9820
2--204
1--200
1--198
1--126
1--42
1--37
1--30
1--28
2--6
1--5
6--2
9--1
1--0
0--0
```

Screen Dump: use CONT to see rest of D() if your program uses more than 22 constants.

```
WELCOME TO MICKEYS MICRO-SKETCH

     BY S K JOHNSON


USE KEYS 5,6,7,8 TO DRAW PICS
PRESS 0 TO ERASE A DOT
PRESS C TO CLEAN SCREEN
PRESS A TO QUIT
```



```
  10 PRINT AT 2,0;"WELCOME TO MI
CKEYS MICRO-SKETCH";'';
   2 PRINT "      BY S K JOHNSON 2
/11/83"
   3 PRINT AT 8,0;"USE KEYS 5,6,
7,8 TO DRAW PICS","PRESS 0 TO ER
ASE A DOT","PRESS C TO CLEAN SCR
EEN","PRESS A TO QUIT"
   4 LET A=0
   5 LET B=0
  10 IF INKEY$="5" THEN GOTO 100
  20 IF INKEY$="7" THEN GOTO 200
  30 IF INKEY$="6" THEN GOTO 300
  40 IF INKEY$="8" THEN GOTO 400
  44 IF INKEY$="0" THEN GOTO 4800
  45 IF INKEY$="A" THEN GOTO 999
  46 IF INKEY$="C" THEN CLS
  50 GOTO 10
 100 LET A=A-1
 101 IF A<=0 THEN LET A=0
 102 GOTO 500
 200 LET B=B+1
 201 IF B>=42 THEN LET B=42
 202 GOTO 500
 300 LET B=B-1
 301 IF B<=0 THEN LET B=0
 302 GOTO 500
 400 LET A=A+1
 401 IF A>=63 THEN LET A=63
 402 GOTO 500
4800 UNPLOT A,B
4490 GOTO 10
5100 PLOT A,B
5000 GOTO 10
 999 STOP
```

Continued from page 13.

```
8990 REM [illegible]
9000 LET 0$="0KEGYUL,0LETSUP,0CA
MDEP,0ROSHAM,0RSLCEA,0IYATBL,0TA
CDAI,0FYHEEI,00SEWDN,0UTOKND,05I
EHPN,0VNTGIE,0DANEZU,0XOBIFR,0GR
RULU,0JOMAB0,"
9010 RETURN
9020 LET 0$="
[illegible]BOGGLER[illegible]
[illegible]
9030 RETURN
9040 LET 0$="1,X,X,4,X,X,4,5,4,7
,8,4,5,4,7,8,4,5,4,1,1"
9050 RETURN
9060 LET 0$="SCORING,LET PTS;,3[illegible]
=[illegible]1,4[illegible]=[illegible]1,5[illegible]=[illegible]2,6[illegible]=[illegible]3,7[illegible]=[illegible]5,8,UP
=11,PRESS,[illegible],TO PLAY,AGAIN,
"
9070 RETURN
9900 LET X=16509
9910 LET N=10
9920 IF PEEK X*256+PEEK (X+1)>=9
000 THEN STOP
9930 REM POKE X,INT (N/256)
9940 REM POKE X+1,N-256*INT (N/2
56)
9950 LET N=N+10
9960 LET X=X+4+PEEK (X+2)+PEEK (
X+3)*256
9970 GOTO 9920
```


As seen in Nov./Dec. SYNC Vol:3#6, Page 66
Translated and distributed by: Jim Wallace
5448 Tilden Rd.,Bladensburg, Md. 20710

YOU CAN BELIEVE YOUR EYES!

WORD PROCESSING
for the
TIMEX / SINCLAIR COMPUTER

UPPER & lower Case - with

NO HARDWARE ADD-ONS !

WORD SINC II+

WORD SINC II+ is a smooth, full feature word processor that will transform your computer (ZX81, T/S 1000, or T/S1500) and printer (ZX or Timex 2040 into a real word processing system.

WORD SINC II+ OFFERS:

42 characters per line on the standard Timex printer.

FULL character set, with all punctuation (see chart).

Smooth, full speed keyboard action, with auto repeat (with controllable speed).

High speed, machine code - controlled printing.

Full Right justification.

Selectable page numbering (with controllable page length).

Search, Replace, Move, Insert, and Delete commands.

Selectable EXPANDED PRINT.

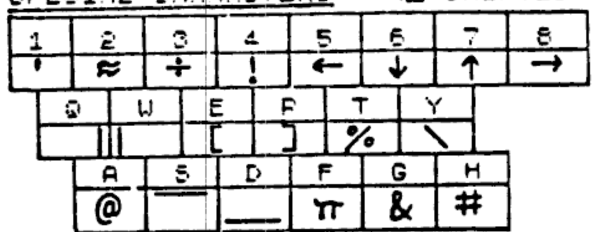
16K to start, holds 8000 characters of text (equal to 6 double spaced pages); easily expandable to 48K memory.

1234567890ABCDEFGHIJKLMNOPQRSTUVWXYZab
cdefghijklmnopqrstuvwxyz$()"-+=:;?/*<>
,.£'≈÷!←↓↑→|[]%\@_π&#

Sample screen:

WORD SINC II+ IS A SMOOTH, FULL FEATURE WORD PROCESSOR THAT WILL TRANSFORM YOUR COMPUTER (ZX81, T/S 1000, OR T/S1500) AND PRINTE R (ZX OR TIMEX 2040 INTO A REAL WORD PROCESSING SYSTEM. WORD S INC II+ OFFERS: 5 42 CHARACTE RS PER LINE ON THE STANDARD TIME X PRINTER. FULL CHARACTER SET, WITH ALL PUNCTUATION (SEE CHART). SMOOTH, FULL SPEED KEYBOARD A CTION, WITH AUTO REPEAT (WITH CO NTROLLABLE SPEED).

SPECIAL CHARACTERS (■ SHIFTED)



To order WORD SINC II+

Fill out coupon below, and enclose your check or money order (no cash please).

@ $20.00 each tape regular . . . . .

SPECIAL CLUB PRICE

$13.00 each tape,
plus $1 P/H first tape, $.75 each additional with full documentation.

Allow three weeks for delivery.

FULL SATISFACTION GUARANTEED

(C) P. Hargrave

Distributed in U.S. by:

"GESANG ASSOCIATES"
P.O. BOX 452
Randallstown, MD, 21133
301-922-0767 after 6 P.M.

"GESANG ASSOCIATES" POST OFFICE BOX 452, RANDALLSTOWN, MD. 21133 TELE: 301-922-0767 AFTER 6 P.M.

PLEASE MAIL ME _____ TAPES OF WSII+ AT THE CLUB SPECIAL OF $13.00 PER TAPE (REG $20)

PLUS POST/HANDL. (SEE ABOVE) (MARYLAND RESIDENTS ADD 65¢ SALES TAX EACH TAPE).

NAME ______________________________

ADDRESS ______________________________

CITY ______________ STATE ________ ZIP ________

TELEPHONE DAY: ______________ EVE. ______________

PLEASE ___PUT ME, _____DO NOT PUT ME, ON YOUR MAILING LIST.

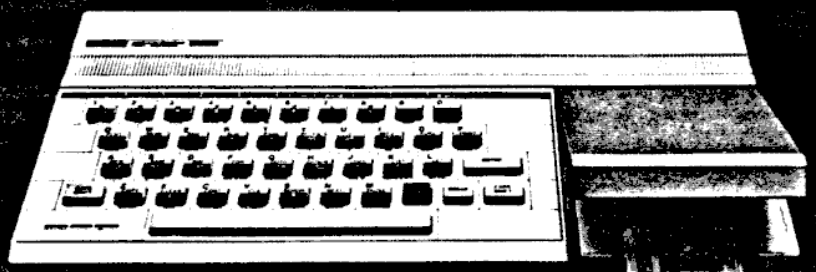
TOTAL FOR TAPES $______.____

POST/HAND. ______.____

SALES TAX (MD.) ______.____

TOTAL ENCLOSED $______.____

72K. COLOR. SOUND. UNDER $200.*



WELCOME TO THE COMPUTER AGE.

To purchase the Timex Sinclair 2068 Computer see your local dealer.

Or mail this coupon to: Timex Computer Corporation, P.O. Box 3138, Wallingford, Conn. 06492. Or call: 1-800-24-T-I-M-E-X.

Item	Price	Qty	Total
Timex Sinclair 2068 Computer	$199.95		
Timex Sinclair 2040 Printer	99.95		
Timex Sinclair 2050 Modem	119.95		
Timex Sinclair 2020 Program Recorder	49.95		
Timex Sinclair 2090 Command Sticks	14.95 ea.		
Please add $5 handling charge			$5.00
		Total	

I enclose a check/money order for $_____.
Please charge my VISA®/MasterCard™ account no.

Please Print

Name

Address

City State

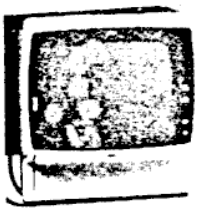
Zip

*Suggested retail price

TIMEX sinclair 2068

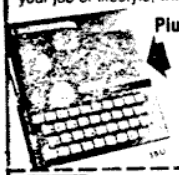
Learn how to Program and Use PERSONAL COMPUTERS

Now at Home in Spare Time, you can learn everything you always wanted to know about personal computers. How to program in BASIC. How to understand and use more than 80 BASIC commands and functions. How to write and run your own programs... for both personal and business applications. How to use pre-packaged software and change it to meet your special needs. How to make sense of the overwhelming maze of books, information and advice available at your local computer store.



More Than Just A Computer Manual

This is more than just another programming manual...it's an entire comprehensive course written by experts. Yet, because it was especially developed for home study, you learn everything right in your own home, without changing your job or lifestyle, without attending a single class.



Plus You Get Your Own Computer

To give you practical hands-on experience, this course includes your own personal computer—the Timex 1000 with 16K memory module—plus a cassette recorder that lets you save your programs on tape. **Get all the facts.**

MAIL COUPON TODAY!

ICS SINCE 1891 COMPUTER TRAINING, Dept. DH053
Scranton, PA 18515

Name _____ Age ____

Address _____

City/State/Zip _____

If you're not satisfied with the action of the keys on your 2068, you don't just have to grin and bear it. You can POKE around, and change the following parameters:

23561--Repeat delay; 1/2 sec is standard.
23562--Repeat Frequency;.08 sec is standard.
23609--Length of keypress beep.

Experiment with POKEing new values into these locations - have fun!

MF

Orders to: **MELBOURNE HOUSE SOFTWARE INC.**
Dept. CS 347 Reedwood Drive, Nashville, TN 37217

Visa and M/C orders can be phoned in: 615/361-5738

Dealer orders and queries: 800/251-5900 (ask for a Melbourne House operator)

TAPES:

☐ 13941	Gamestape 1: 11 Programs - 1K	$14.95
☐ 13942	Gamestape 2: 3 Games - 16K	$14.95
☐ 13943	Gamestape 3: Catacombs Adventure - 16K	$14.95
☐ 13944	Gamestape 4: 3D Monster Maze - 16K	$14.95
☐ 13945	Gamestape 5: 3D Orbiter - 16K	$14.95
☐ 26446	Space Trek - 16K	$14.95
☐ 26359	Super Invasion - 1K	$14.95
☐ 26318	Wall Busters - 1K	$14.95
☐ 26472	10 Exciting Programs - 1K	$14.95
☐ 26284	Reversi - 1K	$14.95
☐ 26406	Toolbox - 1K	$7.50
☐ 26490	Basic Course 2 cassette pack	$14.95
☐ 14026	Combat Flight - 16K	

BOOKS:

☐ 25895	The Complete Basic Course	$34.50
☐ 25957	Machine Language Programming Made Simple	$14.95
☐ 20922	The Complete Timex/Sinclair ROM Disassembly	$19.95
☐ 26025	Not Only 30 Programs	$9.95
☐ 25913	Understanding Your ZX81 ROM	$14.95
☐ 51539	Ins and Outs of the Timex TS1000	$12.95

TOTAL: $_____

Residents of CA, MD, TN, please add sales taxes: _____

Add $2 for Shipping & Handling, foreign orders add $6: _____

TOTAL: $_____

Enclosed is my check or money order for $_____.

SYNC7

Please charge my ☐ Visa or ☐ MasterCard Card # _____ expiration date _____

Signature _____ Name _____

Address _____ City _____ State _____ Zip _____

MELBOURNE HOUSE SOFTWARE

Copyright ©
(review only)

Public Domain
(copying OK)

Software ------- Check where appropriate
Feel free to
add additional
paper if space
is too tight.

TITLE

Quality
1 - 10

Memory
requirements

Tape
Listing
Cartridge
Disk

Graphics
Control
Text
Game
Simulation
Business
Scientific
Educational
Household
Other

Name
Hours when you can be
reached

Send the forms to:

Michael L. Colen
10 A Manor Circle Apt.8
Takoma Park, MD 20912
301-270-5991, days after 11AM
Brief Description

Capitol Area Timex/Sinclair Users' Group
P.O.Box 725
Bladensburg, MD 20710

Name _____

Address _____

_____ ZIP _____

Phone Home _____ Office _____

Memberships - $10.00 (family/individual);make checks payable to C.A.T.S.

If family membership, please list family members participating:

_____

Occupation _____

Ham Radio call sign _____

Equipment

ZX 80	_____	RAM size	_____
MA 80	_____	full keyboard	_____
ZX 81	_____	Printer	_____
TS 1000	_____	type	_____
TS 2000	_____	other interface	_____

Special interest use for computer: ie, games, ham radio interface, business, other, etc. _____

_____

Languages: Basic _____ Other _____

Machine _____ _____

No. of years computer experience _____

What committees would you like to serve on? _____

_____

Comments: _____

_____

UNION LIST/LIBRARY

If you are willing to share the programs you have written with others in the group, here's your chance. If you are willing to let others look at Copyright programs or hardware you have purchased, here's your chance. Your programs (and hardware) will be listed with other member's in a UNION LIST, to be distributed to members. Other members, wishing to see your items, will then contact you directly. The more that contribute, the better it will be!

DATED MATERIAL

IF YOU ARE NOT A MEMBER OF CATS, THIS IS THE ONLY ISSUE YOU WILL RECIEVE
Dues = $10.00 per year, per family.

Next CATS Meeting →→ 2PM ←←←←←←←←←
Saturday, December 10, 1983
New Carrollton Public Library
7414 Riverdale Road, New Carrollton, MD

BULK RATE
U. S. POSTAGE
PAID
Permit No. 40
RANDALLSTOWN, MD.

CATS Newsletter
P.O. Box 725
Bladensburg MD 20710

The mailing address of the Capitol Area Timex/Sinclair User's Group is:

Capitol Area Timex/Sinclair User's group
P.O. Box 725
Bladensburg, MD 20710

CATS is a non-profit special interest organization dedicated to serving the interests of those who own, use, or are interested in learning more about the Timex/Sinclair family of personal computers.

The official contact person for CATS is Jim Wallace: (301) 699-8712 (anytime).

Meetings are held on the second Saturday of each month at 2 P.M. in the large meeting room of the New Carrollton Branch Public Library.

Ham Radio Network Information
QZX Net...Wednesdays, 9p.m. local time; 14.345 MHz NV4F NCS
Eastern Regional Sinclair Net...Sundays, 1600 Z; 7.245 MHz KQ2F NCS